Before the
Federal Communications Commission
Washington, D.C. 20554

WT Docket No. 96-1

In the Matter of

Amendment of Part 87 of the Commission's Rules to Permit Automatic Operation of Aeronautical Advisory Stations (Unicoms)	RM-8495

NOTICE OF PROPOSED RULE MAKING

Adopted: January 11, 1996; Released: January 29, 1996

Comment Date: March 29, 1996
Reply Comment Date: April 29, 1996

By the Commission:

I. INTRODUCTION

1. In this *Notice of Proposed Rulemaking* (*Notice),* we propose to amend the Commission's Aviation Services Rules, 47 C.F.R. Part 87, to eliminate station operator requirements and permit the operation of aeronautical advisory stations (unicoms) in an unattended, automated mode.[1] Allowing automated unicom operations should increase the availability of advisory information at the nation's general aviation airports and, thereby, improve the safe and efficient operation of aircraft. This proceeding was initiated by a Petition for Rulemaking filed by the Potomac Aviation Technology Corporation (PATC).[2] Additionally, we propose to make several minor changes to the Aviation Services Rules.

II. BACKGROUND

2. The unicom service was established in 1950 to provide for air-ground communications primarily between general aviation aircraft and airport facilities. Unicom transmissions are limited to the necessities of safe and expeditious operation of aircraft, including runway conditions, types of fuel available, wind conditions, weather information, dispatching, and other necessary safety information. Unicoms generally may not be used for air traffic control except to relay certain limited information between the pilot and the air traffic controller.[3] Unicom transmissions may include, on a secondary basis, communications pertaining to the efficient portal-to-portal transit of an aircraft, such as available ground transportation, food, and lodging. Unicoms must provide impartial information concerning available ground services, and must provide service to any aircraft station upon request and without discrimination.

3. Unicoms may operate at both controlled and uncontrolled airports. Controlled airports are those that are equipped with either a control tower, a control tower remote communications outlet (RCO), or a Federal Aviation Administration (FAA) flight service station (FSS).[4] Unicoms at controlled airports may not transmit information regarding runway conditions, wind, or weather during the hours of operation of the controlling facility.[5] At uncontrolled airports, unicoms are often the only available source of this type of information. The vast majority of airports in the United States are uncontrolled airports.[6]

4. Only one of the eight assignable unicom frequencies may be authorized at any airport.[7] At a uncontrolled airport, only one unicom station may be authorized.[8] At controlled airports, more than one unicom may operate but all unicoms share a single frequency, 122.950 MHz.

5. The Commission's Rules currently do not permit the unattended, automated operation of unicoms. The rules, however, do permit the automated operation of Automatic Weather Observation Stations (AWOS) at airfields that do not have full-time control tower or FSS.[9] Like unicoms, AWOS systems may provide terminal information, but only with FAA approval. Unlike unicoms, AWOS systems are relatively complex and expensive, and normally are assigned an air traffic control frequency after coordination with FAA.[10] These factors have impeded the widespread installation of AWOS at smaller airports.

---

[1] Section 87.5 of the Commission's Rules, 47 C.F.R. § 87.5, defines unicoms as aeronautical stations used for advisory and civil defense communications primarily with private aircraft stations.

[2] *See* Potomac Aviation Technology Corporation, Request for Rule Interpretation, November 3, 1993, treated as Petition for Rulemaking in *Public Notice,* July 21, 1994 (PATC Petition), and supplemental request of November 8, 1994 (PATC Request).

[3] 47 C.F.R. § 87.213(c).

[4] Control towers provide air traffic control services to aircraft landing on, taking off from, and taxiing at an airport as well as aircraft transiting an airport's traffic area. 47 C.F.R. § 87.417(a). An RCO is an aeronautical radio station at a small uncontrolled airport located near a large airport with a control tower (a controlled airport). The RCO is connected via land lines to the control tower (or other FAA control facility), and enables the FAA to provide air traffic services to more airports and aircraft than would normally be served by the control facility alone. *See,* Amendment of the Aviation Services Rules (Part 87) to Provide for the Licensing of Control Tower Remote Communications Outlet Stations at Airports Without Control Towers, *Order,* 5 FCC Rcd. 4550, July 18, 1990, ¶ ¶ 1-2. An FAA flight service station is part of a network of 131 stations that covers all 50 states. Flight service stations provide weather briefings, information on flight facilities, and monitor the navigational radio net. John F. Welch, ed., *Van Sickle's Modern Airmanship* 737 (1981).

[5] 47 C.F.R. § 87.213(b)(1).

[6] There are currently 18,343 airports in the United States. Control towers operate at 402 of these, and are supplemented by 1,722 RCOs. There are 131 FAA Flight Service Stations. *FAA Fact Book.*

[7] Nine frequencies are listed at 47 C.F.R. § 87.217. The frequency 121.500 MHz, however, may only be used for emergency and distress.

[8] 47 C.F.R. § 87.215(b).

[9] 47 C.F.R. § 87.525.

[10] 47 C.F.R. § 87.529.

III. DISCUSSION

6. PATC has operated automated unicom stations under a developmental license since February 5, 1994.[11] PATC describes its automated unicom as a computerized system that automatically transmits aviation advisory information, weather reports, and a radio check service to pilots.[12] A pilot monitoring local unicom frequencies would receive computer generated voice instructions to operate the PATC system by "clicking" his or her radio microphone three times to request an advisory, or four times to request a radio check. ("Clicks" are generated by momentarily depressing the "push to talk" button on an aircraft radio's microphone).[13] A recorded or computer-generated voice responds with the requested advisory information or a radio check.

7. PATC argues that automated unicoms will help to bring about an overall increase in the availability of unicom services, thereby increasing flight safety. According to PATC, many smaller airfields are minimally staffed and cannot afford to hire full-time unicom operators. Some do not offer any unicom service at all, while others offer sporadic or inadequate services. Even at some controlled airfields, advisory services are not available 24 hours a day. PATC states that eliminating the need for a unicom operator would allow automated unicom services to become available to even the smallest airstrips on a 24-hour basis. PATC further asserts that increased access to advisory information means increased safety for the aviation community.[14]

8. PATC also argues that automated unicoms will make the benefits of the unicom service more widely available without requiring additional frequency allocations. PATC states that automated unicoms will not interfere with other communications on the unicom frequencies because the system is engineered to monitor the assigned frequency and defer transmissions until the frequency is clear. According to PATC, automated transmissions have proved to be an efficient use of the currently available unicom frequencies.[15]

9. We believe PATC's request has merit. Runway conditions and weather information are important for safe flight operations. Advisory information pertaining to available ground services also are an important source of in-flight information--especially for pilots approaching unfamiliar airfields. Radio checks verify the proper operation of what is often a pilot's lifeline: his or her radio. We believe that automatic transmission of the aviation advisory information could make these services available at more airfields, and provide increased service.

10. We remain sensitive, however, to the potential for increased congestion on the often crowded unicom frequencies, particularly at airports near large urban areas which are characteristically surrounded by many busy airports. This typically results in a very heavy usage of the relatively few unicom frequencies during peak airport hours of operation. At present, unicom station operators are able to mitigate the effects of frequency congestion. Automated unicoms also must operate efficiently and avoid causing congestion on unicom frequencies.

11. Therefore, we propose to require that automated unicom stations are specifically programmed and configured to mitigate frequency congestion and efficiently use scarce spectrum. First, in order to reduce the likelihood that automated unicom transmissions will interfere with on-going communications, we propose to require that automated unicoms monitor the assigned frequency prior to transmission, and transmit only after there is no detectable signal on the frequency for a period of at least three seconds. Second, we propose to require that automated unicoms transmit only in response to brief keyed RF signals (microphone clicks). This avoids random and continuous transmissions, while permitting automated unicoms to respond to pilots' requests for advisory information. Third, we propose to require that automated unicom transmissions include the date and time of the most recent update. We believe this "time stamp" assists pilots in evaluating the validity of the information received.[16] Fourth, we propose that automated unicoms must automatically shut down after three minutes of continuous transmission. This proposal will prevent inadvertent continuous transmissions, while providing sufficient time for transmission of advisory information.

12. Finally, we propose to permit only one automated unicom to operate at airports where more than one unicom may be licensed (i.e., at controlled airports). More than one automated unicom at an airport would increase the potential for harmful interference, and provide no additional benefit for safe and efficient aircraft operations. Further, to encourage cooperation and to provide notice to all unicom licensees, we propose to require that, prior to the operation of an automated unicom at a controlled airport, all licensees must sign an agreement stating which licensee(s) will control the automated unicom operation, and, if control is to be shared among several operators, how that control will be divided or scheduled.

IV. CONCLUSION

13. The proposed amendments to Part 87 of the rules to eliminate the station operator requirement, and to authorize the operation of automated unicoms are set forth below in Appendix B. We request comments regarding these proposed amendments. Additionally, we specifically request that commenters address the following issues.

a) The proposed rules require that automated unicoms determine whether the frequency is in use prior to transmitting. A period of at least three-seconds with no detectable signal is proposed to determine that the frequency is not in use. Is this proposal sufficient to avoid interference by automated stations? Should this period be extended? Should another method be used to determine whether the frequency is in use?

---

[11] PATC operates automated unicoms at Potomac Airfield (Maryland), Bay Bridge Airport (Maryland), Chesapeake Tidewater Airport (Virginia), Barre-Montpelier Airport (Vermont), Lebanon Municipal Airport (Tennessee), and Reelfoot Lake Airport (Tennessee).

[12] PATC Request at 5.

[13] Currentlly, radio clicks may only be used to switch on airfield runway lights. 47 C.F.R. § 87.187(y).

[14] PATC Request at 7.

[15] PATC Request at 5.

[16] Automatic weather observation stations have a similar requirement. *See,* 47 C.F.R. 87.525.

b) The proposed rules require that automated unicoms only transmit in response to brief keyed RF signals (i.e., microphone clicks from an aircraft station). Should we authorize other methods of activating an automated unicom? Is the proposal compatible with current methods of activating airport lighting systems as outlined in FAA Advisory Circular 150/5340, "Air-to-Ground Radio Control of Airport Lighting Systems?"

c) The proposal requires automated unicoms to shut down after three minutes of continuous transmission. Is this limitation sufficient to prevent interference due to unintended operation? Is it adequate to allow for transmisssion of necessary advisory information?

d) The proposed rules do not include measures to prevent the repetitive transmission of advisories during congested periods. For example, the rules could limit transmissions to no more than two advisories per ten minute period. Should the Commission limit the number of advisories in a given period? If so, what would be a reasonable limitation?

e) The proposal permits only one automated unicom at controlled airports (where more than one unicom may be licensed). Further, all unicom licensees at controlled airports must sign an agreement regarding automated unicom operations prior to any licensee commencing such automated operations. Is it necessary to limit the number of automated unicoms that may operate at controlled airports? If so, is it necessary that all licensees sign an agreement regarding prior to such operations? Should the agreement be kept with the licensees' station records, as proposed, or should it be submitted to the Commission?

14. In addition, we propose to amend Subparts S and O of Part 87 of the Commission's rules, 47 C.F.R. Part 87 Subparts S and O, in order to update these sections in accordance with current FAA practices. We propose to expand Subpart S to permit Automatic Surface Observation Stations (ASOS) in addition to the Automatic Weather Observation Stations (AWOS) already permitted. SOS Both types of stations provide weather information to pilots, but are administered by different organizations. The AWOS system is administered by the FAA, while the ASOS system is administered by the National Weather Service. Further, we propose to eliminate the requirement to provide a written statement from the appropriate FAA Regional Office with an application for an RCO authorization. Finally, we propose to make a non-substantive editorial amendment in 47 C.F.R. § 87.187(y)(4).

V. PROCEDURAL MATTERS

15. An Initial Regulatory Flexibility Analysis and an Initial Paperwork Reduction Act of 1995 Analysis are contained in Appendix A to this *Notice*.

16. Accordingly, we adopt this *Notice* under the authority contained in Sections 4(i) and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i) and 303(r). Pursuant to applicable procedures set forth in the Commission's Rules, 47 C.F.R. Sections 1.415 and 1.419, interested persons may file comments on or before **March 29, 1996** and may file reply comments on or before **April 29, 1996**. To file formally in this proceeding, you must file an original and four copies of all comments, reply comments, and supporting comments. If you want each Commissioner to receive a personal copy of your comments, you should file an original and nine copies. You should send your comments and reply comments to Office of the Secretary, Federal Communications Commission, Washington, D.C. 20554. Comments and reply comments will be available for public inspection during regular business hours in the Reference Center (Room 239) of the Federal Communications Commission, 1919 M Street, N.W., Washington, D.C. 20554.

17. Written comments by the public on the proposed and/or modified information collections are due **March 29, 1996**. Written comments must be submitted by the Office of Management and Budget (OMB) on the proposed and/or modified information collections on or before 60 days after date of publication in the Federal Register. In addition to filing comments with the Secretary, a copy of any comments on the information collections contained herein should be submitted to Dorothy Conway, Federal Communications Commission, Room 234, 1919 M Street, N.W., Washington, DC 20554, or via the Internet to dconway@fcc.gov and to Timothy Fain, OMB Desk Officer, 10236 NEOB, 725 - 17th Street, N.W., Washington, DC 20503 or via the Internet to fain_t@al.eop.gov.

18. This is a non-restricted notice and comment rule making proceeding. *Ex parte* presentations are permitted, except during the Sunshine Agenda period, provided they are disclosed as provided in Commission rules. *See generally* 47 C.F.R. §§ 1.1202, 1.1203, and 1.206(a).

19. For further information, contact Roger Noel or Jim Schulz, Wireless Telecommunications Bureau, Federal Communications Commission, 2025 M Street, NW, mail stop 1700C2, Washington, DC 20554; telephone (202) 418-0680.

FEDERAL COMMUNICATIONS COMMISSION

William F. Caton
Acting Secretary

APPENDIX A

INITIAL REGULATORY FLEXIBILITY ANALYSIS

1. As required by Section 603 of the Regulatory Flexibility Act, the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) of the expected impact on small entities of the proposals contained in this *Notice*. We request written public comment on the IRFA, which follows. Comments must have a separate and distinct heading designating them as responses to the IRFA and must be filed by the deadlines provided in paragraph 16, *supra*. The Secretary shall send a copy of this *Notice*, including the IRFA, to the Chief Counsel for Advocacy of the Small Business Administration in accordance with paragraph 603 (a) of the Regulatory Flexibility Act. Pub. L. No. 96-354, 94 Stat. 1164, 5 U.S.C. §§ 601-612 (1981).

A. Reason for Action

2. The Commission proposes to permit the automated operation of Aeronautical Advisory (Unicom) Stations.

B. Objectives

3. The Commission seeks to improve unicom service availability without allocating new spectrum to the service or causing an increase in congestion on the unicom frequencies.

C. Legal Basis

4. The proposed action is authorized under Sections 4(i) and 303(r) of the Communications Act, 47 U.S.C. §§ 154(i) and 303(r).

D. Reporting, Recordkeeping and Other Compliance Requirements

5. Our proposed addition of 47 C.F.R. § 87.219 would require all unicom licensees at airports having more than one unicom to sign an agreement, prior to the operation of an automated unicom, stating the name(s) of the licensee(s) who will control the automatic unicom and, if applicable, how control of the automatic unicom will be divided.

E. Federal Rules Which Overlap, Duplicate or Conflict with These Rules

6. None.

F. Description, Potential Impact, and Small Entities Involved

7. Permitting the operation of automated unicom stations will make aviation advisory information more widely available to aircraft operating at small airports, and improve safe and efficient operation of aircraft at such airports. The proposed rules do not place any additional burdens on small entities.

G. Any Significant Alternatives Minimizing the Impact on Small Entities Consistent with the Stated Objectives

8. None.

INITIAL PAPERWORK REDUCTION ACT OF 1995 ANALYSIS

This *Notice* contains either a proposed or modified information collection. As part of its continuing effort to reduce paperwork burdens, we invite the general public and the Office of Management and Budget (OMB) to take this opportunity to comment on the information collections contained in this *Notice,* as required by the Paperwork Reduction Act of 1995, Pub. L. No. 104-13. Public and agency comments are due at the same time as other comments on this *Notice;* OMB comments are due 60 days from date of publication of this *Notice* in the Federal Register. Comments should address: (a) whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; (b) the accuracy of the Commission's burden estimates; (c) ways to enhance the quality, utility, and clarity of the information collected; and (d) ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology.

APPENDIX B

PROPOSED RULES

Chapter I of Title 47 of the Code of Federal Regulations, Part 87, is proposed to be amended as follows:

Part 87 - Aviation Services

1. The authority citation for Part 87 continues to read as follows:

AUTHORITY: 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 303, unless otherwise noted. Interpret or apply 48 Stat. 1064-1068, 1081-1105, as amended; 47 U.S.C. 151-156, 301-609.

2. Section 87.5 is amended by revising the definition of "automatic weather observation station" to read as follows:

§ 87.5 Definitions.

* * * * *

Automatic weather observation station (AWOS) or automatic surface observation station (ASOS). A land station located at an airport and used to automatically transmit weather information to aircraft.

* * * * *

3. Section 87.187 is amended by revising paragraph (y) introductory text and the first sentence in paragraph (y)(4) to read as follows:

§ 87.187 Frequencies.

* * * * *

(y) Brief keyed RF signals (keying the transmitter by momentarily depressing the microphone "push-to-talk" button) may be transmitted from aircraft for the control of automated unicoms on the unicom frequencies listed in paragraph (y)(3) of this section, or for the control of airport lights on the following frequencies:

* * * * * (4) Aviation support station frequencies listed in § 87.323(b):

* * * * *

4. A new Section 87.219 is added to Subpart G to read as follows:

§ 87.219 Automatic operations.

(a) A station operator need not be present when an automated unicom is in operation.

(b) In addition to the requirements applicable to non-automated unicom operations, unicoms operating in an automated mode must:

(1) Monitor the unicom frequency prior to transmission, and transmit only when no detectable signals are received for at least three seconds;

(2) Transmit only in response to brief keyed RF signals from aircraft stations as specified in § 87.187(y);

(3) Automatically shut down after three minutes of continuous transmission.

(c) Automated advisory transmissions must be as brief as possible, and must include the time and date of the advisory message's last update in each transmission.

(d) Only one automated unicom may be operated at an airport. Prior to the operation of an automated unicom at an airport with more than one unicom licensee, all of the licensees at that airport must sign a letter of agreement stating which licensee(s) control the automated unicom operations, and, if control is to be shared among several operators, how that control will be divided or scheduled. The original or a copy of the letter of agreement must be kept with each licensees' station records. Within 90 days of the date upon which a new unicom operator is licensed at an airport where more than one unicom is authorized, and an automated unicom is being operated, an amended letter of agreement that includes the new licensee's signature must be signed or automated unicom operations must cease.

5. Section 87.419 is revised to read as follows:

§ 87.419 Supplemental eligibility.

Only one control tower or RCO will be licensed at an airport.

6. Subpart S is amended by revising the heading to read as follows:

Subpart S - Automatic Weather Stations (AWOS/ASOS)

7. Section 87.525 is revised to read as follows:

§ 87.525 Scope of service.

Automatic weather observation stations (AWOS) and automatic surface observation stations (ASOS) must provide up-to-date weather information including the time of the latest weather sequence, altimeter setting, wind speed and direction, dew point, temperature, visability and other pertinent data needed at airports having neither a full-time control tower nor a full-time FAA Flight Service Station. When a licensee has entered into an agreement with the FAA, an AWOS or an ASOS may also operate as an automatic terminal information station (ATIS) during the control tower's operating hours.

8. Section 87.527 is amended by revising the first sentence of paragraph (b) and paragraph (c) to read as follows:

§ 87.527 Supplemental eligibility.

* * * * *

(b) Eligibility for an AWOS, an ASOS, or an ATIS is limited to the owner or operator of an airport or to a person who has entered into a written agreement with the owner or operator for exclusive rights to operate and maintain the station. Where applicable a copy of the agreement between the applicant and owner or operator of the airport must be submitted with an application.* * *

(c) Only one AWOS, ASOS, or ATIS will be licensed at an airport.

9. Section 87.529 is amended by revising the fourth and fifth sentences to read as follows:

§ 87.529 Frequencies.

* * * Normally, frequencies available for air traffic control operations set forth in subpart E will be assigned to an AWOS, ASOS, or to an ATIS. When a licensee has entered into an agreement with the FAA to operate the same station as both an AWOS and as an ATIS, or as an ASOS and an ATIS, the same frequency will be used in both modes of operation.